

WHAT IS CLAIMED IS:

1. A method for monitoring replication latency in a computer system comprising a plurality of servers connected by a plurality of data links, and wherein the servers periodically replicate object updates with one another and maintain an update sequence number that is increased upon update to the server's replica of a database, the method comprising:

5 first maintaining, by each of the plurality of servers, a timestamp that is posted upon each update to the server's database;

10 second maintaining, by each of the plurality of servers, a replica partner vector table that includes for each other server from which the server replicates, the update sequence number of such other server at a time of a most recent replication from such other server or the timestamp of the last successful replication attempt with such other server;

initiating, by a local server, replication with a remote server by transmitting a copy of the replica partner vector table of the local server to the remote server;

15 comparing, by the local server, the update sequence numbers and timestamps in the replica partner vector table received from the local server to the update sequence numbers and timestamps in the replica partner vector table of the remote server;

20 updating, by the local server, the replica partner vector table received from the local server;

transmitting, by the remote server, a copy of the updated replica partner vector 25 table and object updates to the local server;

improving, by the local server, upon receiving the updated replica partner vector from the remote server, update sequence numbers or timestamps in the partner vector table of the local server; and

calculating, by the local server, a difference between the timestamp for each 25 server in the replica partner vector and a current time.

2. The method of claim 1 further comprising comparing, by the local server, the difference to a maximum allowable latency time period.

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3. The method of claim 2 further comprising generating, by the local server, an alert if the difference is greater than the maximum allowable latency time.

4. The method of claim 3, wherein the alert generated is an email message sent to a  
5 network administrator.

5. The method of claim 3, wherein the alert generated is an email message sent to a user in the computer system.

10 6. The method of claim 3, wherein the alert generated is a message displayed on a user's computer screen.

7. The method of claim 3, wherein the alert generated is a broadcast message to all servers in the computer system.

15 8. The method of claim 1 further comprising transmitting a copy of the remote server's replica partner vector table to the local server, comparing the remote server's replica partner vector table with the local server's replica partner vector table, updating the replica partner vector table received from the remote server, and transmitting a copy of the updated replica partner vector table and object updates to the remote server.  
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9. A computer-readable medium having computer-executable components thereon for monitoring replication latency in a computer system, the computer system comprising a plurality of servers connected by a plurality of data links, and wherein the servers periodically replicate object updates with one another and maintain an update sequence number that is increased upon update to the server's replica of a database, the components performing the steps of:

first maintaining, by each of the plurality of servers, a timestamp that is posted upon each update to the server's database;

second maintaining, by each of the plurality of servers, a replica partner vector table that includes for each other server from which the server replicates, the update sequence number of such other server at a time of a most recent replication from such other server and the timestamp of the last successful replication attempt with such other server;

5           initiating, by a local server, replication with a remote server by transmitting a copy of the replica partner vector table of the local server to the remote server;

             comparing, by the local server, the update sequence numbers and timestamps in the replica partner vector table received from the local server to the update sequence numbers and timestamps in the replica partner vector table of the remote server;

10          10 updating, by the local server, the replica partner vector table received from the local server;

             transmitting, by the remote server, a copy of the updated replica partner vector table and object updates to the local server;

15          15 improving, by the local server, upon receiving the updated replica partner vector table from the remote server, update sequence numbers or timestamps in the partner vector table of the local server; and

             calculating, by the local server, a difference between the timestamp for each server in the replica partner vector and a current time.

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